

Vertex N

N-type i-TOPCon BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-NE19R

POWER RANGE: 590-625W

625W

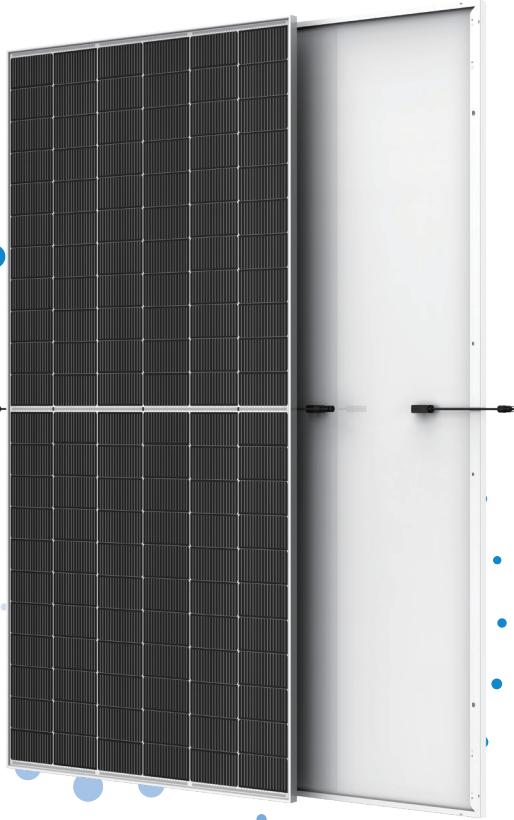
MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

23.1%

MAXIMUM EFFICIENCY



High customer value

- Standardized module size with flagship module power, 30W higher compared with conventional technology
- Low Voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 1%~5%
- Suitable for all scenario, especially C&I, residential, and ground applications
- Higher container space utilization effectively reduces the freight cost
- Excellent compatibility with existing mainstream system components



High power up to 625W

- Up to 23.1% module efficiency, on 210 innovative platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment



High reliability

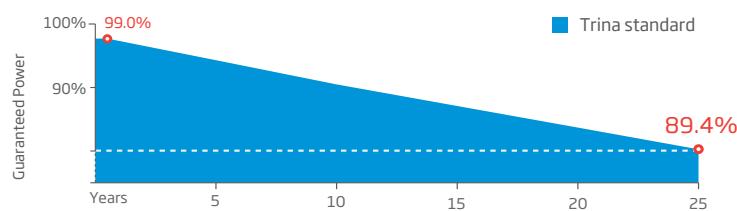
- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PID, LID, LeTID
- Sustainable in harsh environments and extreme weather conditions



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)

Trina Solar's Backsheet Performance Warranty



Comprehensive Products and System Certificates



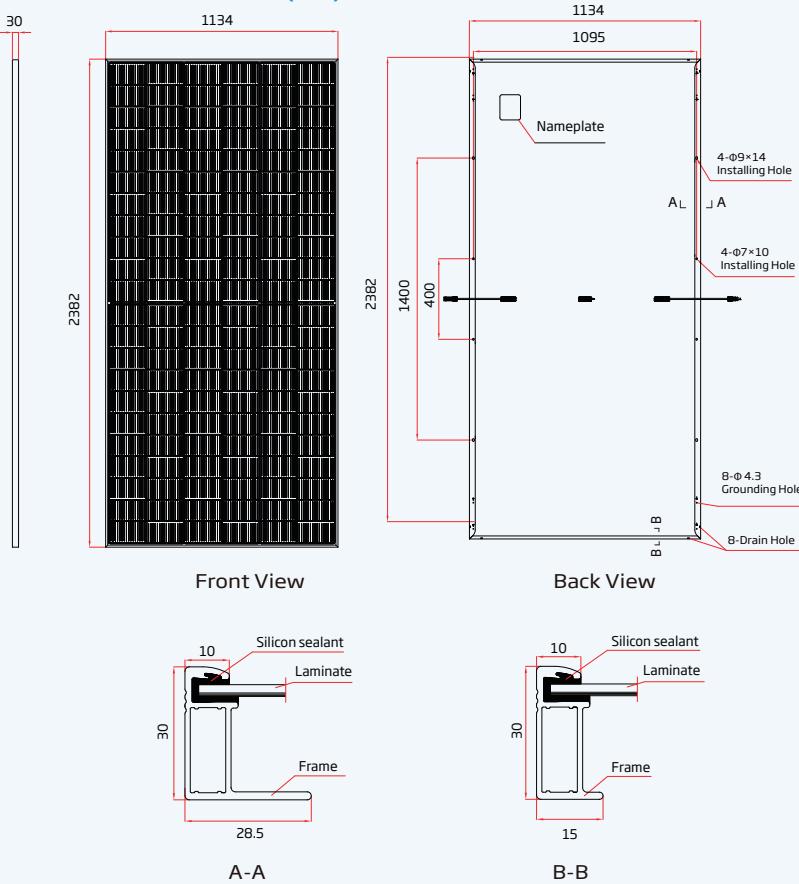
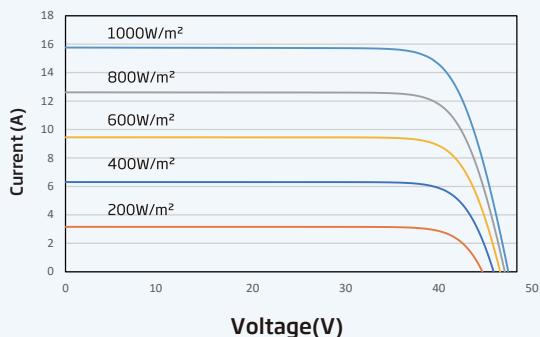
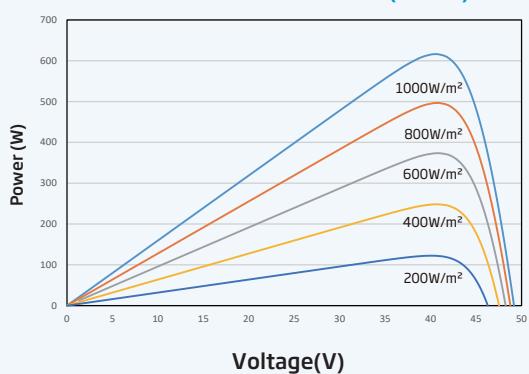
IEC61215/IEC61730/IEC61701/IEC62716/UL61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO14064: Greenhouse Gases Emissions Verification

ISO45001: Occupational Health and Safety Management System

DIMENSIONS OF PV MODULE(mm)

I-V CURVES OF PV MODULE(610W)

P-V CURVES OF PV MODULE(610 W)

ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)*	595	600	605	610	615	620	625
Power Tolerance-PMAX (W)							
Maximum Power Voltage-VMPP (V)	40.0	40.3	40.5	40.8	41.1	41.4	41.6
Maximum Power Current-Impp (A)	14.89	14.91	14.94	14.96	14.98	14.99	15.00
Open Circuit Voltage-Voc (V)	48.1	48.4	48.7	49.0	49.3	49.6	49.8
Short Circuit Current-Isc (A)	15.76	15.80	15.83	15.86	15.89	15.91	15.93
Module Efficiency η m (%)	22.0	22.2	22.4	22.6	22.8	23.0	23.1

MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	132 cells
Module Dimensions	2382x1134x30 mm (93.78x44.65x1.18 inches)
Weight	27.9kg (61.51 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Backsheet	White
Frame	30mm(1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²) Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4 Plus / TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of PMAX	- 0.29%/°C
Temperature Coefficient of Voc	- 0.24%/°C
Temperature Coefficient of Isc	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	30A

WARRANTY

12 year Product Workmanship Warranty
25 year Power Warranty
1% first year degradation
0.4% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box:	36 pieces
Modules per 40' container:	720 pieces